Course Name: Basic Skills

Semester
Grade Level: 11, 12

Endorsement Requirement: Level 2, 3, 4
Prerequisite: Basic Skill Deficiency

Course Description:

Students will improve their understanding and develop the skills related to the standards and objectives outlined in the Utah Basic Skills Competency Test Framework. These standards include arithmetic, algebraic reasoning, basic geometry concepts, basic computational skills, collecting and organizing data, and creating and analyzing graphs. Test-taking skills will be taught throughout, and the Reference Sheet will be used to build familiarity. The course outline is correlated to the UBSCT Framework.

Course Outline:

Number Sense: All objectives must be mastered without the use of a calculator.

- Perform operations: addition, subtraction, multiplication, and division of whole numbers, fractions, decimals, and integers. [1.1]
- Compare and order real numbers. [1.2]
- Simplify mathematical expressions involving exponents using the order of operations. [1.3]
- Recognize, duplicate, extend, and make predictions using patterns. [1.4]

Algebraic Reasoning: All objectives must be mastered without the use of a calculator.

- Plot points when given ordered pairs. [2.1]
- Graph linear functions when given a table of values or intercepts. [2.1]
- Simplify algebraic expressions: Combine like terms, multiply monomials and monomials by binomials, and divide monomials. [2.2]
- Proportions: Use proportions to solve for unknown values. [2.3]
- Solve single-variable linear equations. [2.4]
- Calculate the value of an expression or formula. [2.4]

Geometric Reasoning: Calculator use is acceptable, but not required.

- Identify figures as similar or congruent, and be able to calculate unknown values, including those in scale drawings. [3.1]
- Calculate areas, surface areas, perimeters, volumes, and unknown sides or angles of geometric figures using the formulas provided on the Reference Sheet. [3.2]
- Calculate and/or estimate the area of irregular shapes by dividing them into smaller geometric figures or by using a grid system. [3.3]

Data Analysis: Calculator use is acceptable, but not required.

- Review numeric operations, ordering, order of operations and graphing.
- Analyze graphs: Collect, organize, display, and make reasonable predictions using frequency tables, line plots, scatter plots, pictographs, bar graphs, circle graphs, line graphs, and stem-and-leaf plots with given data sets. [4.1]
- Calculate the mean, median, and range and analyze data using these values. [4.2]
- Differentiate between actual and experimental estimates of probability, and represent the probability of an event as a fraction, percent, or decimal. [4.3]

Teacher Resources:

UBSCT Framework:
http://www.schools.utah.gov/eval/DOCUMENTS/UBSCT_Framework_Math.pdf

UTIPS: http://www.schools.utah.gov/eval/Info_UTIPS.asp

Labs from Cord Geometry and Cord Algebra

Internet sites:
http://edhelper.com/
http://www.thefutureschannel.com